

Attorney Docket No. 1344.1120

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Takafumi TERAHARA, et al.

Application No.: 10/606,935

Group Art Unit: TBA

Filed: June 27, 2003

Examiner: TBA

For: WAVELENGTH DIVISION MULTIPLEXING OPTICAL TRANSMISSION SYSTEM, AND
WAVELENGTH DIVISION MULTIPLEXING OPTICAL TRANSMISSION METHOD

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure provisions of 37 CFR § 1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the subject application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ Form PTO-1449.
- 1b. ☒ Copies of IDS citations.
- 1c. ☐ An English language copy of search report(s) from a counterpart foreign application or a PCT International Search Report.
- 1d. ☐ English language translation (complete or relevant portion(s)) attached to each non-English language publication.
- 1e. ☒ Explanations of Relevancy of References (ATTACHMENT 1(e), hereto) for providing a concise explanation of each non-English publication.
- 1f. ☐ List of Copending Applications (ATTACHMENT 1(f), hereto).
- 1g. ☐ List of Additional Submitted Documents (ATTACHMENT 1(g), hereto).

2. ☒ This Information Disclosure Statement is filed under 37 CFR §1.97(b):

(Check either Item 2a or 2b or 2c or 2d)

- 2a. ☐ Within three months of the filing date of a national application other than a Continued Prosecution Application under § 1.53(d);
- 2b. ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application.
- 2c. ☒ Before the mailing of a first Office Action on the merits; or
- 2d. ☐ Before the mailing of a first Office Action after the filing of a Request for Continued Examination under § 1.114.

3. ☐ This Information Disclosure Statement is filed under 37 CFR § 1.97(c) after the period specified in paragraph 2 above but before the mailing date of any of a Final Office Action under § 1.113, a Notice of Allowance under § 1.311 or an action that otherwise closes prosecution in the application, AND

(Check either Item 3a or 3b; Item 3b to be checked if any reference known for more than 3 months)

- 3a. ☐ The §1.97(e) Statement in Item 5 below is applicable; OR
 3b. ☐ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:
☐ enclosed.
☐ to be charged to Deposit Account No. 19-3935.

4. ☐ This Information Disclosure Statement is filed under 37 CFR §1.97(d) after the period specified in paragraph 3 above, but on or before payment of the Issue Fee, AND

- 4a. ☐ The § 1.97(e) Statement in Item 5 below is applicable; AND
 4b. ☐ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) is:
☐ enclosed.
☐ to be charged to Deposit Account No. 19-3935.

5. ☐ Statement under § 1.97(e) *(applicable if Item 3a or Item 4a is checked)*
(Check either Item 5a or 5b)

- 5a. ☐ In accordance with 37 CFR § 1.97(e)(1), it is stated that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
 5b. ☐ In accordance with 37 CFR § 1.97(e)(2), it is stated that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known by any individual designated in §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

6. ☐ This is a continuation/divisional/continuation-in-part application under 37 CFR § 1.53(b).

(Check appropriate Items 6a and/or 6b)

- 6a. ☐ Copies of the publications listed on the attached Form PTO-1449 which were previously cited in prior application Serial No. ___, filed on ___, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, have been omitted pursuant to 37 CFR § 1.98(d).
 6b. ☐ Copies of the publications listed on the attached Form PTO-1449 which were not previously cited in prior application Serial No. ___, filed on ___, and which is relied on for an earlier effective filing date for the subject application under 35 U.S.C. § 120, are provided herewith.

7. ☐ This is a continuation/divisional application under 37 CFR § 1.53(d) or a Request for Continued Examination under 37 CFR 1.114.
(Check either Item 7a or 7b)
- 7a. ☐ The Issue Fee has not been paid.
- 7b. ☐ A Petition to Withdraw from issue under 37 CFR § 1.313(c) is filed concurrently herewith or has been granted. A continuation/divisional application under 37 CFR § 1.53(d) or a Request for Continued Examination under 37 CFR 1.114, after payment of the Issue Fee, is proper in accordance with 37 CFR § 1.53(d)(1)(ii) or 37 CFR 1.114(a), respectively.
8. ☐ This is a Supplemental Information Disclosure Statement.
(Check either Item 8a or 8b)
- 8a. ☐ This Supplemental Information Disclosure Statement under 37 CFR § 1.97(f) supplements the Information Disclosure Statement filed on _____. A bona fide attempt was made to comply with 37 CFR § 1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental IDS can be considered as if properly filed on _____.
- 8b. ☐ This Supplemental Information Disclosure Statement is timely filed within one (1) month of the Notice under 37 CFR § 1.97 and 1.98, mailed _____.
9. ☒ In accordance with 37 CFR § 1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
(Check appropriate Items 9a, 9b, 9c and/or 9d)
- 9a. ☐ satisfied because all non-English language publications were cited on the enclosed "English language version of the search report or action which indicates the degree of relevance found by the foreign office". (See MPEP § 609, Minimum Requirements for an Information Disclosure Statement, Part A(3): Concise Explanation of Relevance, 8th Ed.)
- 9b. ☐ set forth in the application.
- 9c. ☐ satisfied because an English language translation (complete or relevant portion(s)) is attached to each non-English language publication.
- 9d. ☒ enclosed as Attachment 1(e), hereto.
10. No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than search report(s) from a counterpart foreign application or a PCT International Search Report, if submitted herewith). 37 CFR §§ 1.97(g) and (h).

11. The Commissioner is authorized to credit any overpayment or charge any additional fee required under 37 CFR § 1.17 for this Information Disclosure Statement to Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Dated: 10-2-03
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By: 

John C. Garvey
Registration No. 28,607

FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTORNEY DOCKET NO.

1344.1120

APPLICATION NO.

10/606,935

LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

FIRST NAMED INVENTOR

Takafumi TERAHARA, et al.

FILING DATE

June 27, 2003

GROUP ART UNIT

TBA

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUB- CLASS	FILING DATE
AA						

FOREIGN PATENT DOCUMENTS

	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO	
AB	2000-295174	10/20/00	Japan			abs	
AC	2000-068931	03/03/00	Japan			abs	
AD	61-172389	08/04/86	Japan			abs	

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

AE	Y. Miyano, et al., "1.2-Tbit/s (30 x 42.7-Gbit/s ETDM Optical Channel) WDM Transmission Over 376 km with 125-km Spacing Using Forward Error Correction and Carrier Suppressed RZ Format", OFC2000, PD26-1-3 (2000)
AF	T. Miyano, et al., "Suppression of Degradation Induced by SPM/XPM+GVD in WDM Transmission Using A Bit-Synchronous Intensity modulated DPSK Signal", OECC2000, 14DM3-3 (2000)
AG	T. Tsuritani, et al., " Study on 20Gbit/s-based WDM transmission using bandlimited RZ Optical Signals Generated with Optical Filter", OCS2001-28 (with partial translation) (2001)
AH	T. Ito, et al., "6.4 Tb/s (160 x 40 Gb/s) WDM Transmission Experiment With 0.8 bit/s/Hz Spectral Efficiency ECOC2000, PD1.1 (2000)

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	BA						
	BB						
	BC						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES NO
	BD						
	BE						
	BF						
	BG						
	BH						
	BI						

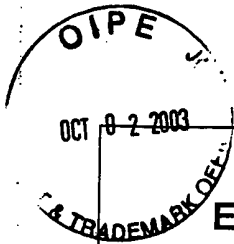
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

	BJ	Y. Frignac, et al., "Transmission of 256 Wavelength-Division And Polarization-division-multiplexed Channels at 42.7Gb/s (10.2Tb/s capacity) over 3 x 100km of Teralight™ Fiber", OFC2002, Postdeadline Papers FC5-1 (2002)
	BK	P. Le Roux, et al., "25 GHz Spaced DWDM 160 x 10.66 Gbit/s (1.6Tbit/s) Unrepeated Transmission Over 380Km", ECOC2001, PDM1.5 (2001)
	BL	H. Ooi, et al., "3.5-Tbit/s (43-Gbit/s x 88 ch) Transmission Over 600-km NZDSF With VIPA Variable Dispersion Compensators", OFC2002, ThX3 (2002)
	BM	I. Morita, et al., "Study on Signals For Long-Distance 40Gbit/s-based WDM Transmission", OCS 40G-6-3, pp.9-12 (with translation) (June 20, 2002)

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ATTACHMENT 1(e)

EXPLANATIONS OF RELEVANCY OF REFERENCES

ATTORNEY DOCKET NO.

1344.1120

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Inventor, Patent Number, Country Author, Title, Name of Document	Issue date	Concise Explanation of the Relevance (indication of page, column, line, figure of the relevant portion)
1. Japanese Unexamined Patent Publication No. 2000-295174	October 20, 2000	Background
2. Japanese Unexamined Patent Publication No. 2000-068931	March 3, 2000	Background
3. Japanese Unexamined Patent Publication No. 61-172389	August 4, 1986	Background
4. Y. Miyamoto, et al., "1.2-Tbit/s (30 x 42.7-Gbit/s ETDM optical channel) WDM transmission over 376 km with 125-km spacing using forward error correction and carrier-suppressed RZ format" OFC2000, PD26,	2000	Background
5. T. Miyano, et al., "Suppression of degradation induced by SPM/XPM+GVD in WDM transmission using a bit-synchronous intensity modulated DPSK signal" OECC2000, 14D3-3	2000	Background
6. T. Tsuritani, et al. "Study on 20Gbit/s-based WDM transmission using bandlimited RZ optical signals generated with optical filter" OCS2001-28	2001	Background
7. T. Ito, et al. "6.4 Tb/s (160 x 40 Gb/s) WDM TRANSMISSION EXPERIMENT WITH 0.8 bit/s/Hz SPECTRAL EFFICIENCY" ECOC2000, PD1.1	2000	Background

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OF REFERENCES

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FIRST NAMED INVENTOR

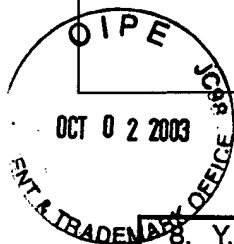
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8. Y. Frignac, et al. "Transmission of 256 wavelength-division and polarization-division-multiplexed channels at 42.7Gb/s (10.2Tb/s capacity) over 3 x 100km of Teralight™ fiber" OFC2002, Postdeadline Papers FC5-1	2002	Background
9. P. Le Roux, et al. "25 GHz SPACED DWDM 160 X 10.66 Gbit/s (1.6Tbit/s) UNREPEATERED TRANSMISSION OVER 380km" ECOC2001, PDM1.5	2001	Background
10. H. Ooi, et al. "3.5-Tbit/s (43-Gbit/s x 88 ch) transmission over 600-km NZDSF with VIPA variable dispersion compensators" OFC2002, ThX3	2002	Background
11. I. Morita et, al. "Study on signals for long-distance 40Gbit/s-based WDM transmission" OCS 40G-6-3, pp.9-12	June 20, 2002	Background